

**To: Dunedin City Council**  
**By Email: [districtplansubmissions@dcc.govt.nz](mailto:districtplansubmissions@dcc.govt.nz)**

**Submitter Details**

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Submission on Plan Change 1 to the Dunedin Second Generation Plan

**Introduction**

- 1.1 This submission is lodged on behalf of Totara-Dunedin Properties Limited.
- 1.2 They could not gain an advantage in trade competition through this submission.
- 1.3 The specific provisions of the proposal that this submission relates to are:
  - (a) 4.5.4.X Noise – Construction and site investigation vibration
  - (b) 4.9.2X construction and site investigation vibration
  - (c) 4.10.2X construction and site investigation vibration
  - (d) 4.11.2 construction and site investigation vibration
  - (e) Policy 13.2.1.10 and associated assessment rules 13.7.3.1 and 13.8.4.3
  - (f) Rule 13.2.3.1

(g) Rule 13.8.4.3

### **Submission**

2.1 Totara Dunedin Properties Limited owns land within Dunedin City. Most relevantly 372-390 Princes Street. It has relatively recently completed demolition of buildings on its property and is currently exploring redevelopment options. As a result, it has recent and direct experience about the management of vibration caused by demolition, and will need to manage the same with respect to redevelopment of the site.

### *Construction Vibration Provisions*

2.2 Effects on building integrity from construction activities on adjoining land is currently a civil matter between the relevant parties. That process typically involves undertaking dilapidation studies of nearby buildings (where consent of the owner is provided) prior to construction, with those buildings then reassessed post construction to determine whether any damage has occurred or not. The section 32 report does not clearly identify why that regime is not working or requires further regulatory intervention.

2.3 What is proposed is unnecessarily burdensome, uncertain and potentially ultra vires. The 'insignificance' test via Policy 13.2.1.10 is effectively an 'avoid' policy. Non-compliance with the proposed standards leads to either discretionary or non-complying activity status (depending on the level of non-compliance). Special information requirements and assessment criterion introduce a management plan process and compliance with the German Standard DIN 41503:201.

2.4 Such an onerous regulatory framework is totally inappropriate to manage the effects of an activity that involves such a wide range of variables already addressed via other mechanisms. First and foremost, it is very difficult to establish any correlation between ground vibration (velocity) and building damage. Dilapidation studies are not 100% accurate and nor are geotechnical studies to determine ground condition. The effects of the existing vibration environment (for example, vibration from existing traffic) is often unknown given it is not always consistent. Such factors make it difficult to model the response of old structures with uncertain construction and dilapidation state.

- 2.5 The proposed regulatory framework would also make it essential to assess adjoining buildings, but this relies on approval of the building owners. If this is not forthcoming, and pre and post construction assessments are not possible, it will not be possible to carry out the necessary assessment of potential effects. A further problem with this is the Council staff's ability to 'consider whether the proposal is in accordance with German Standard DIN 4150–3:2016 Vibrations in Buildings'. In the Submitters experience, they have little technical knowledge or understanding of the standard which will necessitate engaging subject matter experts at significant cost. Given the civil obligations that exist and will continue to exist it is unclear what this additional cost burden is designed to achieve.
- 2.6 The section 32 report sets out the 'background and issues of concern' in relation to this matter. Nowhere does it provide any examples of where construction work has adversely impacted on heritage buildings. It suggests that what is proposed is a solution in search of a problem.
- 2.7 We note from experience with demolition where the proposed vibration limits have been exceeded, no damage occurred to the buildings of concern. That experience also indicates that vibration, at times, will exceed the standards proposed by this plan change. However, they do not appear to exceed the standards proposed for construction work in the Styles Group report that informed the plan change provisions. This is because the standards incorporated into the Plan appear to be based on amenity concerns as opposed to building damage concerns. These are two entirely different matters and amenity concerns can be managed in a number of different ways. While complying with the amenity standard is likely to ensure no building damage occurs using that one standard as the trigger for consent it imposes increased regulatory hurdles in place.
- 2.8 The limits finally selected by Council conflate the issues. They are significantly lower than what Styles Group have recommended for building damage and do not incorporate the flexibility they proposed for short term vibration. The Styles Group recommendation was rejected because it they would be "ambiguous and would not be clearly understood by Plan users." That illustrates the point made above – this is not a black and white issue, as there are many variables at play. It is submitted that the construction industry understands the issue, and it is already appropriately address through the steps taken to manage civil liability. The Council simply does not need to intervene.

2.9 If Council chooses to retain a vibration standard, it should be focussed on amenity only. However, as vibration from construction activities is generally intermittent, we consider the limits in Rule 4.5.4X to be too low and do not reflect a practical approach to the issue. The Styles Group report have recommended 2 mm/s, which has been adopted by Council, but the effect of that value is discussed in Table 2 of the Styles Group report as part of a range, being 2 mm/s to 5 mm/s. 2 mm/s is considered tolerable if warnings are given. 2 mm/s – 5 mm/s “can be tolerated where the vibration occurs intermittently during the day, and where the occupants have been informed that the vibration will be for a short duration and will not result in cosmetic building damage.” Despite this, 2 mm/s is the permitted level, but 5 mm/s is a non-complying activity. This makes no sense. We also note that the same table states that 5 mm/s to 10 mm/s “is unlikely to be tolerated for longer than brief and intermittent exposures”. Construction vibration is generally ‘brief and intermittent’ so is tolerable at this level for short periods.

2.10 Hence, the amenity vibration standard must be more nuanced than what is proposed here. While we can accept 2 mm/s as a permitted baseline, allowance must be provided to exceed this under certain circumstances (such as a limited number of times of day, with warning etc) without the need for consent. When consent is sought to exceed the standard, non-compliance should be a ‘controlled activity’ so that appropriate management approaches can be put in place but the potential for development to occur is not imperilled.

### **Outcome sought**

3.1 I seek the following decision from the local authority: that the identified provisions be amended to give effect to the submissions made above: namely:

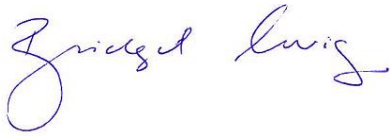
- (a) The proposed changes to the rules are refused; or
- (b) The provisions are amended so that:
  - (i) The permitted activity standards allow for a small number of daily exceedances (say 10) of the 2mm/s limit.
  - (ii) a controlled activity consent is required where permitted standards are breached and only in relation to potential effects on amenity.
  - (iii) Policy 13.2.1.10 is deleted

(iv) Rules 13.7.3.1 and 13.9.4.3 are deleted

3.2 I wish to be heard in support of my submission.

3.3 If others make a similar submission, I will consider presenting a joint case with them at a hearing.

Dated 18 December 2024

A handwritten signature in blue ink, appearing to read "Bridget Irving". The signature is written in a cursive style with a large initial 'B'.

Bridget Irving

Counsel for the Submitter